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# Th10b

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Staff:	Jim Baskin
Staff Report:	April 23, 2004
Hearing Date:	May 13, 2004
Commission Action:	

**STAFF REPORT: REGULAR CALENDAR**

APPLICATION NO.:	<b>1-03-039</b>
APPLICANT (S):	<b>Clarence Westbrook and Harry Wetherell</b>
AGENT:	Frank Galea, Galea Wildlife Consulting
PROJECT LOCATION:	The upstream portion of the Woodruff Gravel Bar in the Smith River, 1.5 miles downstream from the Dr. Fine Bridge (US 101), in the Smith River Planning Area of Del Norte County. APNs 105-020-02, -03, & -21.
PROJECT DESCRIPTION:	Restore a historic deep-water pool by excavation of approximately 40,000 cubic yards of sand and gravel from the low-flow channel alongside upper Woodruff Gravel Bar in the Smith River. Approximately 5,000-10,000 cubic yards of the gravel removed to restore the pool would be used to fill in a dissection in the Woodruff Bar that is causing bar destabilization. The remainder of the aggregate removed would be sold to pay for the project and provide revenue to the Wetherell Ranch.
PLAN DESIGNATION:	RCA-1, General Resource Conservation Area.

ZONING: RCA-2(e)(r), Designated Resource Conservation Area – Estuary, Riparian Vegetation.

LOCAL APPROVALS RECEIVED: Del Norte County Use / Coastal Development Permit No. UP8969, renewed for five years on March 7, 2001.

OTHER APPROVALS RECEIVED: State Lands Commission trust lands review; and California Department of Conservation - Office of Mine Reclamation reclamation plan review.

OTHER APPROVALS REQUIRED: Del Norte County Use / Coastal Development Permit No. UP8969 annual mining plan authorization for 2004 season; California Department of Fish and Game Sec. 1603 Streambed Alteration Agreement; and U.S. Army Corps of Engineers Letter of Modification to Permit No. 28222N.

SUBSTANTIVE FILE DOCUMENTS: *Smith River Gravel Study*, California Department of Water Resources, January, 1974; *Programmatic Mitigated Negative Declaration for Gravel Extraction on the Lower Smith River and Rowdy Creek*, County of Del Norte, July, 2000; *Biological Opinion – U.S. Army Corps of Engineers Letter of Permission Procedure to Permit Gravel Mining in Del Norte County, California*, National Marine Fisheries Service, September, 2003; *Public Notice – Letter of Permission Procedure to Permit Gravel Mining in Del Norte County, California*, U.S. Army Corps of Engineers, March 26, 2004; *2003 Gravel Extraction Salmonid Monitoring Surveys, Sultan, Huffman and Upper Woodruff Bars, Smith River, Del Norte County*, Galea Wildlife Consulting, January 25, 2002; and *Geomorphology and Hydrology Wetherell – Upper Woodruff Bar Salmon Habitat Restoration*, EGR & Associates, Inc. August 30, 2003.

### **SUMMARY OF STAFF RECOMMENDATION**

Staff recommends that the Commission DENY the coastal development permit application for sand and gravel extraction on the basis that the proposed project is inconsistent with the Coastal Act.

The applicants seek authorization to conduct mineral extraction within the live waters of the Smith River, an environmentally sensitive area that provides aquatic habitat to a variety of fish and wildlife species and which could be easily disturbed or degraded by human activities and developments. The major issues raised by the application are: (a) whether the proposed development is consistent with Section 30236 of the Coastal Act which authorizes channelization, damming, or other substantial alterations of rivers and streams only for certain limited purposes, including developments where the primary function is the improvement of fish and wildlife habitat; and (b) whether the proposed development is consistent with Section 30233 of the Coastal Act which limits the allowable uses for the dredging and filling of open coastal waters, wetlands, and estuaries only for certain limited purposes including restoration purposes; (c) whether the mining and restoration as proposed is consistent with Section 30253 of the Act and would assure geologic stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the project site or surrounding area geologic stability; and (d) whether the proposed diversion of river water into a 48" culvert during project construction would have significant adverse impacts on recreational boating on the river inconsistent with the public access policies of the Coastal Act.

Because of the low rainfall over the last four years and the lack of large precipitation events that result in flood-stage sediment-mobilizing flows, very little replenishment of sand and gravel materials has occurred along the lower Smith River gravel bars, including the subject Woodruff Bar site. As a result of this lack of replenishment, further skimming of the exposed gravel bar would compromise the channel's width-to-depth proportions setting the stage for significant changes in river morphology that could lead in turn to further impacts to sensitive habitat areas in and along the river, and to adjacent farmlands.

Given the current lack of material build-up on the exposed bar and following the Commission's denial in 2002 of a proposal for extract gravel from within a diverted reach of the main channel as being inconsistent with restrictions within the Coastal Act prohibiting mineral extraction from within environmentally sensitive habitat areas, the applicants have looked at other ways to undertake commercial gravel extraction that would concurrently incorporate habitat restoration and the improvement of fish and wildlife habitat as principal objectives. As a consequence, although the project is predicated upon a major portion of the sand and gravel materials extracted being made available for commercial sale as aggregate products, the development is also being proposed in the interest of restoring and improving fish and wildlife habitat.

Staff recommends that the Commission find that the proposed project is inconsistent with the Coastal Act and deny the proposed application for the following reasons:

- As the proposal to re-create the historic deep-water pool habitat and fill-in the breach within Woodruff Bar is dependent upon to the applicants being allowed to commercially sell 75 to 88 percent of the gravel materials extracted from the pool excavation that would not be utilized in filling the bar cross-channel, the proposed development does not constitute development where the primary function is the improvement of fish and wildlife habitat. Therefore, the development is inconsistent with Section 30236 as the development is not for one of the purposes for which Section 30236 allows substantial alteration of rivers and streams. No further analysis of the proposed project is required to find the development inconsistent with the policies and standards of the Coastal Act and support denial of the project. However, the Commission notes that even if the proposed uses of the site were consistent with the purposes for which Section 30236 allows the substantial alteration of rivers set out above, which it is not, the project is also inconsistent with other sections of the Coastal Act, as discussed below;
- Though proposed to restore habitat for migrating salmonid fish species, the in-stream excavations, diversion structure fill and channelization and other substantial alterations to excavate the proposed pool in the river would not likely result in meaningful restoration of salmon cold refugia habitat and would not, therefore, constitute “restoration purposes” as required by Section 30233(a)(7); and
- The development would interfere with the public’s right of access to the sea and water-oriented recreational activities.

Staff believes the Commission cannot make the required findings under Sections 30236, 30233, and the public access policies of the Coastal Act. Therefore, staff recommends DENIAL of the application.

Commission staff continue to believe that the applicants could feasibly modify the proposed project to make it consistent with all applicable policies of the Coastal Act. For example, to demonstrate that the proposed trench excavation was sincerely being pursued foremost for purposes of restoring deep-water pool habitat rather than for other commercial ends, further consideration might have been given to self-scouring trench design features, such as digger logs or boulder wing-deflectors, that would help pool depth persist. An undertaking to both re-establish and sustain the historic cold-water refuge habitat along Woodruff Bar would more clearly be viewed as an earnest contribution to long-range recovery efforts for endangered and threatened fish species rather than to justify further excavation of sand and gravel materials for commercial sale and/or to create a sediment trap feature for capturing seasonal floodwater-transported sediment materials for extraction in future years. Such features would boost the

restoration's cost-benefit ration by reducing the frequency of the need to re-enter the main channel to conduct periodic dredging to maintain pool depth. In addition, by integrating such established in-stream habitat within the project design, the likelihood of the project's success would be heightened.

Additionally, had the habitat improvement and streambed stabilization measures been structured as part of a series of coordinated actions developed by a constituency of governmental, academic, industry, and interested party stakeholders for regionally improving and restoring habitat for salmonids throughout the entire Smith River hydrologic unit, not just a independent proposal focused solely on the project reach, then the primary purpose of the project would more reasonably concluded to be for the improvement of fish and wildlife habitat, as required by Section 30236, rather than principally a means to generate commercial income. As an element in a cooperative effort to provide region-wide benefits, the exclusive economic benefits derived from the sale of the surplus extracted materials would appear to be more of a secondary motivation and not the principal impetus for the project.

The applicants would also need to demonstrate that there is no feasible less environmentally damaging alternative to physically dredging-out the pool and would need to provide mitigation for any other significant adverse impacts of the project on riverine habitat as required under Section 30233(a). To produce an approvable project, the applicant would also need to further demonstrate that the project design would assure structural stability of the river channel morphology to enable the Commission to find consistency with Section 30253. In addition, the applicants would need to use a railroad flatcar or other free-spanning viaduct for vehicular access across the diversion channel and onto Woodruff Bar instead of a culverted crossing to ensure that public recreational boating access is protected and not interfered with as required by Sections 30210, 30211, and 30212.

The motion to adopt the Staff Recommendation for Denial is found on page 6.

### **STAFF NOTES**

#### **1. Jurisdiction and Standard of Review**

The site of the proposed surface mining project is on the Woodruff Bar and within the perennial low-flow channel of the Smith River, 1.5 miles downstream of the State Highway 101 bridge. The project is located within the Coastal Commission's area of original or retained jurisdiction (see Exhibit No. 3). The standard of review is the applicable Chapter 3 policies of the Coastal Act.

**2. Commission Action Necessary**

The Commission must act on the application at the May 13, 2004 meeting to meet the requirements of the Permit Streamlining Act.

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**I. MOTION, STAFF RECOMMENDATION, AND RESOLUTION**

The staff recommends that the Commission adopt the following resolution:

**MOTION:**

I move that the Commission approve Coastal Development Permit No. 1-03-039 pursuant to the staff recommendation.

**STAFF RECOMMENDATION OF DENIAL**

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of the majority of the Commissioners present.

**RESOLUTION TO APPROVE PERMIT:**

The Commission hereby **denies** a coastal development permit for the proposed development on the ground that the development will not conform to the policies of Chapter 3 of the Coastal Act. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

**II. FINDINGS AND DECLARATIONS.**

**A. Site Description and Project History.**

The project site comprises an approximately ¼-mile reach of the perennial low-flow channel of the lower Smith River together with the upstream portion of the Woodruff Gravel Bar, located about 1½ miles downstream and west of the Dr. Fine Memorial Bridge crossing of Highway 101 in Del Norte County (see Exhibit Nos. 1 and 2). The Woodruff Bar is one of five gravel bars that are located within the coastal zone along the lower reaches of the Smith River. The Smith River enters the Pacific Ocean about 3.5 miles south of the Oregon border. The river has the greatest annual discharge per square mile of any major California basin. The run-off is estimated at 2.9 million acre-feet annually. The river has no exports of surface water, and therefore it has come to be

known as one of the cleanest and most pristine rivers in California, especially on its upper reaches. The lower Smith River flows in a roughly south-southeast to north-northwest direction through the Smith River Plain, a large uplifted marine terrace consisting of the Tertiary- to Quaternary-aged Battery and St. George Formations. This broad alluvial floodplain is extensively used for agriculture.

The project site is within the Commission's retained permit jurisdiction and is not governed by the certified LCP. Lands adjacent to the project site have land use plan designations of Prime Agriculture and Resource Conservation Area (AE, RCA), implemented through a Designated Resource Conservation Area – Estuary, Riparian Vegetation, (RCA-2 (e)(r)) zoning district.

In its present configuration, the perennial main channel of the Smith River runs along the southwestern side of the Woodruff Bar with a seasonal high-flow channel flanking its northeastern side. From bank to bank, the river is about 600-700 feet wide in the area of Woodruff Bar. However, during the summer and early fall months when low flow conditions prevail, the river is confined to a main channel of approximately 100 to 200 feet in width. The seasonal high-flow channel is dry during the summer and early fall gravel extraction season. Two secondary low-flow channels that are shallowly wetted during the dry season flow across the bar roughly dividing the stream feature laterally into thirds. As the river rises, the direction of flows changes from being routed tangentially around the bar through the main channel in a north-northwesterly direction to diagonally east-southeast to west-northwest across the bar through the secondary channels.

Access to the gravel bar is currently via an unimproved gravel road that crosses the seasonal channel and ascends the riverbank to a levee road leading to Fred Haight Drive. An approximately 4-acre (300-ft.·600-ft.) cleared and graded stockpiling area lies off of the access road approximately 250 feet from the riverbanks (see Exhibit Nos. 2 and 3 ).

The banks of the river are 20-30 high and are covered with well-established riparian vegetation dominated by a Sitka willow (Salix sitchensis) and red alder (Alnus rubra) plant community. These dominants are interspersed with tan oak (Lithocarpus densiflora) and firs (Abies sp.), with an understory composed primarily of Himalaya blackberry (Rubus discolor), California blackberry (Rubus ursinus), French broom (Genista monspessulana), coyote brush (Baccharis pilularis), and various forbs, ferns and upland grasses.

The riparian vegetation found on the gravel bar consists of two plant associations, a permanent palustrine scrub-shrub complex encompassing three contiguous acres along the northeastern side of bar. In addition, six acres of non-persistent palustrine scrub-shrub complex occur in four discrete areas on the northwest, east, and southeast sides of the bar. These areas range in size from approximately ½-acre to 2½ acres in size and

contain riparian vegetation, chiefly small Sitka willows (Salix sitchensis), with ½-inch to one-inch stem diameters-at-breast-height (see Exhibit No. 3).

The proposed project area was the subject of a wetlands investigation conducted in July, 1995, by Karen Theiss and Associates, Biological and Environmental Consultants. An updated vegetation assessment for the project site was prepared by Natural Resources Management Corporation (NRMC) in April, 2000 and January, 2001, and field-checked by the applicants' biological consultant in May, 2001. Among other observations, these investigations note that the bar is subject to hydrologic scouring during high flow periods over the winter and early spring seasons during normal rainfall years. This regime causes vegetative cover on the site to be limited to low-water vegetation characterized mostly by herbaceous and scattered young willows. All portions of the proposed extraction and fill sites are located a minimum of 100 feet from any of the riparian vegetation environmentally sensitive areas on the site.

The applicants have mined the upper portion of Woodruff Bar only sporadically in recent years, with approximately 40,000 cubic yards extracted during the 2000 season, within the 60,000 cubic yards/year limit imposed by Coastal Development Permit 1-00-005 and other permitting agencies, and approximately 15,000 cubic yards removed during the 2001 season. Past volumetric assessments (Larue, 1997, 1998, 1999) indicate that in previous years, in excess of 60,000 cubic yards of material was available within the proposed extraction area. However, due to low rainfall during the winter months over the last four years and a corresponding drop in river flows, little replenishment of the Woodruff Bar has occurred since the 2000 mining season. For the 2002 mining season, the applicants proposed to extract upwards of 28,400 cubic yards of aggregate materials from the gravel bar margin and adjacent low-flow channel. The Commission denied a permit for this development finding that the proposed commercial mining would have entailed mineral extraction within an environmentally sensitive habitat area, contrary to the standards of Section 30233(a)(6) the Coastal Act. Furthermore, based upon the information submitted, the Commission concluded that the application had not adequately demonstrated that the project was a legitimate restoration project and that potential geologic instability impacts would be avoided or mitigated to less than significant levels.

**B. Project Description.**

Because of the low rainfall over the last four years and the lack of large precipitation events that result in flood-stage sediment-mobilizing flows, very little replenishment of sand and gravel materials has occurred along the lower Smith River gravel bars, including the subject Woodruff Bar site. As a result of this lack of replenishment, further skimming of the exposed gravel bar would compromise the channel's width-to-depth proportions setting the stage for significant changes in river morphology that could lead in turn to further impacts to sensitive habitat areas in and along the river, and to adjacent farmlands.



Given the current lack of material build-up on the exposed bar and following the Commission's denial in 2002 of a proposal for extract gravel from within a diverted reach of the main channel as being inconsistent with restrictions within the Coastal Act prohibiting mineral extraction from within environmentally sensitive habitat areas, the applicants have looked at other ways to undertake commercial gravel extraction that would concurrently incorporate habitat restoration and the improvement of fish and wildlife habitat as principal objectives. As a consequence, although the project is predicated upon a major portion of the sand and gravel materials extracted being made available for commercial sale as aggregate products, the development is also being proposed in the interest of restoring and improving fish and wildlife habitat.

The applicants propose to recreate a roughly 10- to 20-foot-deep, 50-to 175-foot-wide pool flanking the southwestern side of Woodruff Bar in the location of a previous "hole" that existed in this location prior to being filled-in with material deposited from sediment-laden flood waters during the 1964 flood. The applicants contend that the recreated pool would provide deepwater habitat for rare and endangered salmonid fish species as they migrate through this reach of the river. In addition, the applicants propose to place a portion of the materials excavated from the pool onto the mid-section of Woodruff Bar within a diagonal cross-bar channel that formed in recent years as the result of the improper diversion of river flows during the removal of temporary channel crossings installed for gravel truck access during past-bar-skimming operations at the site. If this breach in the bar is not repaired, the channel may eventually expand to capture the river's main channel and re-direct the main erosive flows of the river towards the flood-control levee along the southwestern bank, possibly leading to its eventual failure. In addition to causing the inundation of significant areas of agricultural lands, such a failure could significantly alter the river channel downstream, further eroding the banks and adversely affecting the riparian habitat of the river.

To accomplish these objectives, the applicants request authorization to remove up to 40,000 cubic yards<sup>1</sup> of river-run sand and gravel aggregates during the 2004 mining season from a teardrop-shaped 800-foot-long excavation area to be located within the year-round main channel of the Smith River. As proposed, the excavation would comprise a 300-foot-long · 50-foot-wide · 10-foot-deep upstream section, a 200-foot-long · 100-foot-wide · 15-foot deep middle section, and a 300-foot-long · 175-foot-wide · 20-foot-deep downstream section, with 20- to 30-degree side slopes and a 1:10 head slope.

The applicants state that the proposed wet-trenching technique was suggested by and designed in consultation with the National Marine Fisheries Service (NOAA Fisheries)

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<sup>1</sup> Assuming idealized prismatic cross-sections, and depending upon the actual side slope contours utilized, the described trench area would yield a total of approximately 32,900 to 39,460 cubic yards of aggregate materials if fully excavated to the dimension ranges stated in the permit application.

and the California Department of Fish and Game (CDFG). A further discussion of gravel extraction methods follows in Findings Section II.C, below.

The roughly ¼-mile-long diversion/extraction area would first be separated from the live waters of the river by placement of approximately 20 10-foot-lengths of concrete “k-rails” across the main channel at the upstream end of the diverted reach at two constrictions in the river near the head of Woodruff Bar (see Exhibit No. 4). The “k-rail” barriers would divert water towards the secondary high-flow channel that separates the bar from the northwestern bank of the river. The barriers would be placed in such a fashion to allow an unquantified volume of river water to trickle into and through the diverted reach to prevent interstitial habitat for aquatic organisms within the riverbed gravels from becoming desiccated.

A temporary crossing would need to be constructed so that excavation equipment and personnel could gain access to the bar without having to pass through the redirected river flows. The applicants propose to install a culverted crossing over the diversion channel consisting of an approximately four to five-foot-high bermed-up abutment approaches, formed from gravel materials taken from the exposed portions of the bar, graded up to and over a 48-inch-diameter corrugated metal pipe set at-grade within the secondary diversion channel (see Exhibit No. 4). Consequently, recreational boating passage through the project site would entail either a lengthy portage around the margins of an active mining operation, or, for those kayakers and other boaters wishing to remain in their craft, making a potentially hazardous run beneath the access route through the culvert in the diversion channel conveying the concentrated river flows. The applicants opine that disruption of recreational boating access will be less than significant because very few boaters utilize the lower reaches of the river during the time of year when mining activities would be conducted.

Once the river waters have been diverted into the secondary channel alongside the northeast side of the gravel bar, excavation of the deep-water pool would then be accomplished by mechanized equipment, such as excavators, bulldozers or front-end loaders stationed along the southern side of the exposed bar. Approximately 5,000 to 10,000 cubic yards of the excavated material would be replaced onto the upper Woodruff Bar to fill in the diagonal cross-bar channel that is beginning to bisect the bar. The remaining 30,000 to 35,000 cubic yards of sand and gravel excavated from the trench would be loaded onto dump trucks and transported to the stockpile area in the upland areas along the northern riverbank for further processing (i.e., screening, crushing, washing). The processing operations would be performed in Del Norte County’s coastal development permit jurisdiction pursuant to County Conditional Use Permit No. UP-8949C. Upon completion of the mining, the diversion barriers would be removed to allow river waters to return to the deepened main channel. Once the river flows have been returned to the main channel, the temporary crossing berms and culverts would similarly be removed from the bar.

No further information was provided as to what reclamation and winterization work would be conducted upon the completion of the restoration and gravel extraction phases. Generally, following the end of the extraction season by early- to mid-October, the mining operator would be required by the permitting agencies to remove all equipment from the extraction site and smooth out any temporary stockpiles, pits or mounds formed on the bar during mining activities. This action is required under both the Corps' LOP procedure and the CDFG Streambed Alteration Agreement to avoid potential water quality impacts, instigation of erosion of the bar or channel relocation during winter-spring higher flows, and to prevent the stranding of fish when the river level recedes in late spring.

### **C. Smith River Resource Issues and Regulatory Background.**

#### Resource Utilization

The Smith River has 11 gravel bars that have been mined on a regular or periodic basis since 1914. Five of these bars are located on the lower Smith River within the coastal zone (i.e., downstream of the Highway 101 / Dr. Fine Bridge). The gravel bars on the Smith River contain a renewable resource of cobbles, gravel, sand, and other rock-derived products. There has been an on-going demand for gravel and aggregate products within Del Norte County because of the construction of a variety of private developments and public facility improvements.

The Smith River and its tributaries are ranked among the most significant anadromous fisheries in Northern California. Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), Klamath Mountain Province steelhead (*Oncorhynchus mykiss irideus*), and coastal cutthroat trout (*Oncorhynchus clarki clarki*) are among the most important species with regard to commercial and sports fisheries. The project area and the lower Smith River are mainly utilized by anadromous fish as a migration route to and from upstream spawning grounds. Most spawning areas along the lower Smith River have previously been lost due to sedimentation of this river system, although some main stem spawning use does occur by Chinook salmon.

In addition to the fish and wildlife habitat the river affords, the Smith River is also recognized for its significant recreational and aesthetic values. In 1972, the Smith River was included in the original listing of waterways under the California Wild and Scenic Act (PRC §5093.50 *et seq.*). The reach of river passing through the project site is classified as "recreational." PRC Section 5093.53 defines recreational rivers or river segments as: "...those rivers or segments of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past." Restrictions on land uses along recreational rivers are not as stringent as those on their "wild" or "scenic" counterparts, and are primarily limited to prohibiting the construction of dams or other permanent diversion structures. The protection and enhancement of recreational uses are stressed

with particular emphasis placed on ensuring that river front development does not block or impede recreational access within navigable waters.

The Smith River also provides domestic water supply to many residents of northern Del Norte County, including the City of Crescent City, the unincorporated town of Smith River, and Pelican Bay State Prison. Water is drafted from the river's aquifer through subsurface "Ranney Well" pumps operated by the City of Crescent City and several other community services districts. The service areas' current (1997) combined water consumption rate is approximately 62 million gallons per month.

#### Gravel Extraction Methodologies

Gravel bar extraction operations are seasonal activities. The gravel extraction season usually runs from June 1<sup>st</sup> to October 15<sup>th</sup> of each year. This period of time coincides with low water conditions on the river when substantial portions of the gravel bars are exposed and are above the live waters of the river.

Because of the dynamic nature of sediment transport within river systems, an adaptive management approach has been used in determining both the most appropriate locations for mining to occur and the least environmentally damaging extraction method to be used. In the past, the applicants have taken gravel from the Woodruff Gravel Bar using skimming operations, trenching operations, or a combination of both methods. Over the last decade, due to regulatory concerns about past trenching operations, the bar-skimming method has become the primary method of taking gravel from river bars.

Gravel removal by skimming occurs outside of the low-flow channel of the river. In skimming operations at the site, the operator skims gravel from the top of the bar in a manner that creates a shallow-sloped plain rising gently back from the river to the landward edge of the bar. Gravel removal equipment includes front-end loaders, scrapers, pushcats, excavators, or equivalent equipment. Gravel is transported from the extraction site by dump trucks or off-road trucks and stockpiled on the upland portion of the subject property. After completion of gravel extraction operations, the applicants return the gravel bar to a smoothly graded condition, sloping toward the main channel at no less than a two-percent grade, and without any pits, potholes, trenches, mounds, or stockpiles to prevent the creation of fish traps.

However, bar-skimming should not necessarily be viewed as an environmentally-superior mining technique compared to other forms of extraction. To the contrary, in situations where adequate replenishment has not occurred and the gravel bar profile has been lowered to within one to two feet of the water's surface, continued skimming on the bar could compromise the channel confining properties that the bar affords. If unabated, the loss of vertical diversity within the stream cross section may instigate major alterations in water flow and bedload depositional patterns, resulting in the formation of a shallow, multi-channeled riverbed configuration, or causing other changes in stream morphology

with associated impacts to fish and wildlife habitat and water quality. Accordingly, bar-skimming should only be used when site conditions support its application.

By contrast, trenching involves the excavation-at-depth of aggregate materials. Removal equipment is usually limited to back-hoes and excavators stationed along the side of the area to be trenched. Materials are generally removed off of the bar by lifting materials with the equipment bucket and placing them directly into a nearby dump truck for transport from the mining site. Trenching can take several forms: (1) “dry-trenching,” in which a pit is dug wholly within the bounds of the exposed gravel bar; (2) “wet-trenching,” where an area within the wetted channel of the river is de-watered by diversion of the river waters around the site and aggregate materials are removed directly from the riverbed; and (3) “alcove trenching,” wherein an off-channel backwater area is excavated at the downstream end of the point bar to create a deep cold-water pocket in which fish may hold during migration periods. In addition, a “modified dry-trenching” technique has also been authorized in the past, where gravel materials are removed from the areas along the margins of the bar that have been separated from the river’s waters by coffer damming, water-filled barriers, sheetpile bulkhead, or other types of impoundments.

The applicants propose to perform wet-trenching within a low-flow channel on the seasonally exposed portions of the bar during the 2004 extraction season. Trenching operations have been proposed in the past to: (1) encourage future gravel recruitment; (2) increase the hydraulic capacity of the low-flow channel; (3) create deep-water habitat for aquatic species; and (4) maintain the geomorphology of the river’s bar and riffle, bank, and channel configuration. Trenching has been undertaken at various sites along the Smith River as recently as 2001.

#### Regulatory Chronology

Beginning in 1975 with the adoption of the Surface Mining and Reclamation Act or “SMARA” (PRC §2710 *et seq.*), the regulation of gravel mining has been a steadily evolving process. Reauthorization and amendments to the Federal Clean Water Act (CWA) in the early 1990’s saw the U.S. Army Corps of Engineers (USACOE) becoming more actively involved in regulating many in-stream gravel operations under the auspices of the CWA Section 404 permit program. The extent of the Corps’ CWA Section 404 authority with respect to in-stream gravel mining has subsequently been addressed and modified through several judicial rulings known as the “Tulloch Ruling Decisions.”

Until the 1990’s, there had been little coordinated review of the combined effects of the various gravel mining operations. An in-stream gravel mining operation can require the approval of a number of different agencies. Permits granted prior to the 1990s by the various approving agencies were site-specific and granted with little acknowledgement of the cumulative effects of gravel mining.

California Department of Fish and Game Lake or Streambed Alteration Agreements

The California Department of Fish and Game (CDFG) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the State Legislature in the 1960's enacted Sections 1600 through 1607 of the California Fish and Game Code. These statutes requires that any person, business, state or local government agency, or public utility who proposes an activity that may impact a river, stream, or lake to notify the CDFG prior to commencing the activity. Notification to CDFG is required for activities that will: (a) divert, obstruct, or change the natural flow or the bed, channel or bank of any river stream or lake; (b) use material from a streambed; or (c) result in the disposal or deposition of debris, waste, or other material where it can pass into any river, stream, or lake.

If CDFG determines that the project may adversely affect existing fish or wildlife resources, a Lake or Streambed Alteration Agreement is required. An agreement is first drafted by the Department containing a list of measures needed to be taken to ensure that fish and wildlife resources are protected. Department staff will then generally work with project proponent to find a mutually acceptable solution, offering suggested ways to modify the project so that harmful impacts to fish and wildlife resources would be eliminated or reduced.

Once the Lake or Streambed Alteration Agreement has been executed between the Department and the project proponent, and all other legal requirements have been satisfied (i.e., the securement of other related permits and authorizations), the proposed activity may be undertaken.

Following the order issued by the County of Mendocino Superior Court on February 3, 1999, in Mendocino Environmental Center, EPIC, et al. v. California Department of Fish and Game, CDFG initiated changes in its Section 1603 Streambed Alteration Agreement process. The Department now conducts a tiered environmental review of such projects pursuant to the California Environmental Quality Act (CEQA).

County of Del Norte Surface Mining and Reclamation Program

The County of Del Norte regulates surface mining and quarries as a conditional use pursuant to Title 7, Chapter 7.36 of the Del Norte County, adopted as Ordinance No. 77-16 on April 15, 1977. The ordinance contains operational standards and limitations for mining and reclamation activities for the purpose of "keeping with the protection of the public health, safety, convenience, and general welfare." Conditional use permits for gravel mining may be issued for terms up to five years, subject to an annual review of the mining operation's compliance with permit conditions.

In 1999, the County of Del Norte began updating its environmental documentation for the 11 Smith River gravel operations. A programmatic Mitigated Negative Declaration was adopted July 7, 2000. This document updates the previous project analyses conducted

during the late 1980's and early 1990's, and incorporates mitigation and monitoring provisions in response to changes in regulatory programs, environmental review requirements, and federal and state threatened and endangered species listings (i.e., coho salmon, steelhead) which have occurred since their preparation. Under the current mitigation and monitoring programs, assessments of river and habitat conditions are conducted annually by the County's hydrologist in consultation with other resource agencies to determine appropriate quantities and areas for extraction for the upcoming season.

U.S. Army Corps of Engineers Letter of Permission Procedure and Section 7 Consultation with NOAA Fisheries and USFWS

In the fall of 1993, due to an amendment to the Army Corps of Engineers Clean Water Act Regulatory Program, the Army Corps of Engineers (Corps) became more involved in regulating gravel extraction operations. Whereas previously, the Corp's regulatory review of many in-stream gravel extraction operations focused mainly on the installation of channel crossings and stockpiling of material on the river bar, in 1993, the Corps began actively regulating incidental fill related to gravel mining activities themselves. In an effort to streamline the processing of Corps permits for numerous in-stream gravel operations within Del Norte County, the Corps adopted a Letter of Permission (LOP) procedure for authorizing such projects. On March 28, 1997, the USACOE issued a Letter of Permission No. 96-2 for the Del Norte County in-stream gravel mining operations which established a programmatic framework of extraction performance standards alleviating the need for individual Section 404 permits. The original LOP ran for a five-year period and was due to expire on March 22, 2002. As discussed below, the LOP was subsequently extended and renewed. The original LOP was adopted after a series of interagency and public meetings. Under the procedure, an applicant for a project covered by the LOP must submit yearly gravel plans and monitoring information to the Corps for approval. The Corps LOP procedure incorporates the County's review process outlined above.

As with all "federal actions" that might adversely impact rare, threatened, and endangered fish and wildlife, the LOP process is also subject to consultations with applicable natural resource trustee agencies as required under Section 7 of the Federal Endangered Species Act (FESA). FESA Section 7 directs all Federal agencies to use their existing authorities to conserve threatened and endangered species, and, in consultation with other federal agencies possessing ecological expertise regarding ecology and habitat requirements for these plants and animals, ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Section 7 applies to management of Federal lands as well as other Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal permits, licenses, or other actions such as the proposed LOP gravel mining authorization procedure.

The consultation process primarily consists of the agency undertaking the action compiling biological assessment data detailing the current status of the fish and wildlife species within the area subject to the federal agency action and a preliminary assessment of the likely effects of the action on those species. This information is then submitted to the particular resource agencies assigned the responsibility for ensuring protection to the various FESA-listed species.

The National Marine Fisheries Service (NOAA Fisheries) issues a Biological Opinion regarding impacts of gravel extraction as proposed to be authorized by the LOP to listed salmonid species. Mitigation measures identified within the biological opinion are incorporated into extraction requirements of the LOP. As more information is gathered or conditions change with respect to the affected listed species, NOAA Fisheries may initiate consultation wherein a revised interim Biological Opinion is issued, revising operational standards and limitations as may be required to ensure protection of the listed species.

The National Marine Fisheries Service originally issued a Biological Opinion (Opinion) for the Letter of Permission Procedure for Gravel Mining and Excavation Activities within Del Norte County, California (LOP 96-2) in July, 1997. By the late 1990's the listing and candidacy of several anadromous salmonid fish species by the National Marine Fisheries Service (NOAA Fisheries) resulted in habitat and incidental take consultation requirements under the Federal Endangered Species Act (FESA) to be applied to riverine activities such as gravel mining. These actions included the May 1997 listing of the SONCC coho salmon as a threatened species. On September 12, 1997, NOAA Fisheries issued a new Biological Opinion regarding the USACE's LOP, finding that the implementation of the Corps' gravel mining letter of permission was not likely to jeopardize the continued existence of threatened SONCC coho salmon during the authorized period of mining.

Several other Endangered Species Act listing actions occurred subsequent to the issuance of NOAA Fisheries' 1997 Opinion. In March 1998, the Klamath Mountain Province steelhead trout became a candidate for FESA listing. NOAA Fisheries subsequently determined that listing of the species was not warranted. In response to the designation of critical habitat areas for the SONCC coho salmon, on September 23, 1999, the USACOE requested NOAA Fisheries to re-initiate consultation again on the Corps' Letter of Permission. NOAA Fisheries contracted a study to review the efficacy of regulatory efforts to protect listed fish species to date. On September 5, 2000, NOAA Fisheries issued a third Biological Opinion covering the 2000 and 2001 extraction seasons. The study concluded that the Corps' gravel mining regulatory program was not likely to jeopardize the continued existence of threatened SONCC coho salmon during the authorized period of mining. In June, 2001, the Corps extended the expiration date of LOP 96-2 to cover the entire 2001 mining season and requested that NOAA Fisheries amend the Biological Opinion to analyze the effects of the proposed extension of the LOP. The revised Biological Opinion was issued late in 2001.



NOAA Fisheries began working with the Corps, other agencies, and Del Norte County gravel operators and their consultants during the winter of 2001-2002 on a replacement LOP procedure originally anticipated to be in place for the 2002-2007 extraction seasons (LOP 2002-2). A draft LOP 2002-2 was circulated for public comment in May, 2002 at which time it became apparent to involved agencies that several issues could not be resolved prior to the 2002 mining season. As a result, to enable gravel extraction to be authorized for the 2002 gravel mining season, the Corps decided to further extend LOP 96-2 (re-enumerated as "LOP 96-2a") through December 31, 2002 to cover the 2002 mining season. The Corps requested that NOAA Fisheries again amend the 2000 Biological Opinion to analyze the extended duration of LOP 96-2a. The requested amended opinion was issued on August 16, 2002 with a conclusion that extending the LOP 96-2 procedures for gravel mining operations during 2002 "is not likely to jeopardize the continued existence of SONCC coho salmon or destroy or adversely modify its designated critical habitat."

In response to a consultation request from the Corps of Engineers circulated in late 2002, in September 2003, NOAA Fisheries issued a Biological Opinion addressing the effects that riverine mining activities in Del Norte County for the period of 2003 through 2007 under renewed LOP-2002-3 (now re-enumerated as LOP 2003-2) would have on listed fish species and essential fish habitat (see Exhibit No. 6). Under the preceding LOP 97-2, extraction for gravel mining purposes was restricted to skimming of exposed point bars and the areas "adjacent to the active channel of the Smith River, but remain outside of the wetted channel for all other waters." LOP 97-2 also provided for berms to be established to separate the extraction area from the active portion of the river. This latter extraction method has come to be referred to as "modified dry trenching" in past Commission permitting actions.

By contrast, LOP 2003-2 allows mining within a wider variety of settings, including within wetted low-flow channels, insofar as such projects are located "where geomorphic processes would normally result in pool formation and maintenance, as determined by a qualified hydrologist or geomorphologist." This program change ostensibly allows for trenching beyond the bar margins within the live water low-flow channel subject to prescribed performance standards recommended within NOAA Fisheries' Biological Opinion. These performance standards were incorporated as conditions within the Corps' final LOP document, issued March 26, 2004 (see Exhibit No. 5). These performance standards include:

- Locating the trenches a sufficient distance from riffles to protect the landforms from head-cutting that could adversely affect their elevation and stability;
- Limiting trench excavation to the period of July 15 to August 30 to minimize and buffer against impacts to migrating or rearing adult and juvenile salmonids;

- Placing large woody debris or boulders placed within the trenches following completion of excavation to provide habitat for holding or rearing adult and juvenile salmonids;
- Completely and entirely removing the berm or other containment and/or diversion structures from the channel once in-stream gravel extraction has been completed and suspended sediment has been allowed to fully settle;
- Leaving a layer of gravel on the bottom of the excavated trench; and
- Making the approval of any trenching proposals contingent upon a NOAA Fisheries-approved fish relocation plan.

#### Listing of Coho Salmon Under the California Endangered Species Act

On July 28, 2000, the California Fish and Game Commission (CFGF) received a petition from the Salmon and Steelhead Recovery Coalition requesting that the coho salmon north of San Francisco (i.e., Southern Oregon / Northern California Coast Environmentally Significant Unit or “SONCC Coho ESU”) be listed as an endangered species under the California Endangered Species Act (CESA). The petition described runs of coho as having declined 90 percent in the past 30 years, to stand at 1 percent of the historic levels. CFGF subsequently forwarded the petition to the California Department of Fish and Game (CDFG) to review the petition and determine whether acceptance of the petition would be appropriate. On April 5, 2001, the CFGF accepted the petition for listing, initiating a 12- to 14-month review period by CDFG in which appropriate recommendations on the requested listing were to be developed. During that period, the protection granted to listed species under the CESA was extended to candidate species, specifically prohibiting taking of the species without the express consent of CDFG.

On April 27, 2001, the CFGF published a notice of findings declaring the coho a candidate species. Pursuant to Section 2084 of the Fish and Game Code, CDFG also adopted a Statement of Proposed Emergency Regulatory Action for the species’ candidacy period. The so-called “2084 rules” establish a variety of performance standards for various types of in-stream activities, including gravel mining, that are to be required as part of any Streambed Alteration Agreements issued by CDFG. The standards are intended to minimize potential impacts to the coho during its listing candidacy.

In April 2002, the CDFG released Candidate Status Review Report 2002-3, “Status Review of California Coho Salmon North of San Francisco.” The report concluded that CDFG had found that while a CESA “endangered” listing was not warranted at this time, the SONCC Coho ESU was in serious danger of becoming extinct throughout all or a significant portion of its range. Accordingly, CDFG recommended that the CFGF list the SONCC Coho ESU as “threatened.” The CFGF subsequently took action at the August 30<sup>th</sup> meeting, listing the coho as an endangered species in the area between San Francisco

Bay and Punta Gorda and threatened between Punta Gorda and the California-Oregon border. To allow time for preparation of a recovery plan on how best to protect the coho, the CFGC placed a suspension on the listing to allow additional time for preparation of the recovery plan.

Subsequently, the CDFG Director initiated a multi-stakeholder statewide Coho Recovery Team (CRT) to make recommendations for a recovery plan. On August 28, 2003, The Department presented the Recovery Strategy for California Coho Salmon to the Fish and Game Commission, a document compiling the findings and recommendations developed by the CRT (see Exhibit No. 7). After receiving the Department's report and considering and responding to public comments and public testimony on the Recovery Strategy document, at its regular meeting of February 4, 2004, the Fish and Game Commission approved the recovery strategy and authorized its staff to publish notice of the Commission's intent to amend Title 14, Section 670.5 of the California Code of Regulations to formally list the SONCC ESA coho as a threatened species and hold requisite hearings on the listing (see Exhibit No.8). As of the date of the writing of this report, a final listing of the SONCC ESA coho remains pending.

#### Coastal Development Permit Authorization

The proposed project requires a coastal development permit from the Commission because the proposed mining and extraction activities are specifically enumerated in the Coastal Act definition of development that requires a coastal development permit pursuant to Sections 30106 and 30600 of the Coastal Act and because the gravel bar is located within the Commission's area of original or retained permit jurisdiction (see Exhibit No. 3). As described in detail above, the project before the Commission calls for: (1) diverting an approximately 1,270-foot-long area of the main channel of the lower Smith River with a series of concrete traffic control "k-rail" barriers; (2) extracting approximately 40,000 cubic yards of sand and gravel for by wet-trenching from an 800-ft.-long teardrop-shaped excavation area within the de-watered main river channel; (3) placing approximately 5,000 to 10,000 cubic yards of the materials to be extracted from the river channel onto the middle portion of upper Woodruff Bar to repair a diagonal cross-bar channel that has formed due to past mining activities and is destabilizing the channel-confining form and function of the landform; and (4) transporting the net 30,000 to 35,000 cubic yards of materials extracted from the main channel for processing and commercial sale as aggregate products.

All processing and stockpiling of the excavated materials would be performed away from the gravel bar and outside of the Coastal Commission's permit jurisdiction. The project requires a separate coastal development permit from Del Norte County for temporarily stockpiling and processing the materials at an upland portion of the applicants' property. The local coastal development use permit for processing and stockpiling of materials at an upland location was approved by the County in June 2, 1999 for a term of seven mining seasons, expiring on February 1, 2006. This local approval was not appealed to the Commission. The applicants are in the process of obtaining an annual review by the

County of their proposed extraction activities for the 2002 season (i.e., extraction stockpiling, and aggregate materials processing) pursuant to the requirements of the use permit.

#### Inter-agency Coordination

The regulatory developments described above underscore how close multi-agency review coordination and a comprehensive approach to river management of in-stream surface mining projects may be the only way in which permitted operations will be sustainable in the future. To this end, beginning in the Spring of 2001, meetings between the various regulatory agencies involved in Smith River mining were initiated. The purpose of these workshops was to foster a greater understanding of the roles and concerns of each agency and to promote greater efficiency in the review and permitting of gravel mining proposals. Among others, participants included staff from the USACOE, CDFG, NOAA Fisheries, U.S. Fish and Wildlife Service, California Department of Conservation – Office of Mine Reclamation, County of Del Norte, City of Crescent City, the University of California – Sea Grant Program, and the Coastal Commission.

#### **D. Development within Coastal Rivers and Streams.**

Section 30236 of the Coastal Act. Section 30236 provides that:

*Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.* [emphases added]

Section 30236 sets forth a number of different limitations on what projects may be allowed that cause substantial alteration of rivers and streams. For analysis purposes, a particular development proposal must be shown to be: (1) for a necessary water supply project; (2) for certain specified flood control projects; or (3) primarily for fish and wildlife habitat improvement. In addition, the development must incorporate the best mitigation measures feasible.

The proposed project is not proposed as a water supply project and would have no effect on water supplies. In addition, although preventing future damage to a flood control levee is cited as a rationale for filling-in the cross-channel forming on Woodruff Bar, the proposed development is not proposed as a flood control project and has not been shown to have any positive effect on actual flooding. Although the application portrays the channelizations as being for improvement of fish and wildlife habitat, the primacy of such improvement among the project objectives has not been established. The project proposes that 75 to 88% of the total 40,000 cubic yards of gravel to be excavated be

utilized for commercial sale. Furthermore, the applicants have indicated that the proposed restoration work would not be undertaken unless allowances for selling the surplus extracted materials not utilized on the Woodruff Bar are included in the Commission's action on the permit. As the vast majority of the gravel to be excavated would be utilized for commercial purposes and the applicants indicate the project would not be undertaken unless allowances are made for commercial sale of the gravel, the Commission finds that the primary purpose of the project is commercial gravel extraction rather than the improvement of fish and wildlife habitat. The Commission further finds that as the primary purpose of the stream channel development is not the improvement of fish and wildlife habitat, and the development is not a flood control project or a necessary water supply project, the streambed development proposed is inconsistent with Section 30236 of the Coastal Act.

The Commission notes that while the proposed project is not consistent with the provisions of Section 30236, other development proposals that might include gravel extraction for the improvement of fish and wildlife habitat may very well be found to be consistent with Section 30236 provided that "primary function" of the project work is found to be for "the improvement of fish and wildlife habitat."

No further analysis of the proposed project is required to find the development inconsistent with the policies and standards of the Coastal Act and support denial of the project. However, the Commission notes that even if the proposed uses of the site were consistent with the purposes for which Section 30236 allows the substantial alteration of rivers set out above, which it is not, the project is also inconsistent with other sections of the Coastal Act, as discussed below.

**E. Dredging, Diking, and Filling in Wetlands and the Protection of Riverine Environment.**

As presented in the application, the proposed project involves surface mining extraction of sand and gravel within the Smith River streambed using heavy mechanized equipment for grading and dredging operations. The operation is portrayed as having restoration benefits as the extraction would result in the creation of cold deep-water holding habitat for salmonids. Several Coastal Act policies address protection of the portion of the river environment below the ordinary high water mark from the impacts of development such as gravel mining. These policies include Sections 30231 and 30233. Section 30231 applies generally to any development in riverine environments and other kinds of water bodies in the coastal zone. Section 30233 applies to any diking, filling, or dredging project in a river and other coastal waters. Gravel extraction within a riverbed is a form of dredging within coastal waters and wetlands. Depending upon the nature of the proposed work, restoration activities within a streambed are similarly a recognized form of permissible dredging, diking, and/or filling within coastal waters and wetlands.

Section 30231 of the Coastal Act states, in applicable part:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes... shall be maintained and, where feasible restored...*

Section 30233 of the Coastal Act states, in applicable part:

- (a) *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

...

- (6) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

- (7) *Restoration purposes...*

...

- (c) *In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...*  
[emphases added]

The above policies set forth a number of different limitations on what fill, dredging, channelization, damming, and watercourse alteration projects may be allowed in coastal waters. For analysis purposes, the limitations can be grouped into four general categories or tests. These tests are:

1. That the purpose of the fill and dredging is for one of the eight use categories enumerated under Section 30233(a);
2. That feasible mitigation measures have been provided to minimize the adverse environmental effects;
3. That the project has no feasible less environmentally damaging alternative;
4. That the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible; and

As discussed below, the Commission finds that the proposed development is inconsistent with test 1, in that the purpose of the fill and dredging project is not for one of the eight use categories enumerated under Section 30233(a).

1. Permissible Use for Dredging of Open Coastal Waters and Wetlands

The first test set forth above is that any proposed fill, diking or dredging must be for an allowable purpose as enumerated under Section 30233 of the Coastal Act. The proposed project involves dredging, diking, and filling of wetlands for mineral extraction and restoration purposes. Surface mining of gravel aggregate materials is specifically enumerated as a permissible use in the above-cited policy, if the activity is not undertaken in environmentally sensitive areas; Section 30233(a)(6) allows dredging for mineral extraction, provided the activity is not undertaken in environmentally sensitive areas. Therefore, to the extent that the proposed gravel extraction would avoid environmentally sensitive areas, the proposed project would be consistent with the use limitations of Section 30233(a)(6).

Section 30107.5 of the Coastal Act defines “environmentally sensitive area” as:

*Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in the ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Under this definition, any area supporting a plant, animal, or habitat is environmentally sensitive if the area meets two main criteria: (1) the plant, animal, or habitat is either rare or of special value because of their unique nature or role in the ecosystem, and (2) the area could be easily disturbed or degraded by human activities and developments.

The perennially-inundated areas within the river meet the first criterion of the definition of environmentally sensitive area during the time that the proposed mining would be conducted as the reach may contain rare or endangered species, namely federal- and state-listed salmonids using this reach as a transit corridor between areas of holding habitat prior to the onset of upstream migration.

The perennially-inundated areas within the river clearly meet the second criterion in that diversion, dewatering, fill, and dredging activities for gravel extraction in the river, such as proposed by the applicant, can quickly disturb and degrade the habitat areas the mining activities come in contact with, at least during the mining activities. In addition, on a more permanent basis long after the initial excavation work is completed, trenching can also destabilize the river channel and easily cause erosional impacts that can degrade the perennially inundated areas within the river. Furthermore, the portions of the riverbed that remain wetted also qualify as environmentally sensitive areas because of their special role as a holding area and transit corridor for migrating threatened salmonids.

The Commission has previously determined in numerous permit actions that riverine perennial channels are environmentally sensitive areas. The Commission has

consistently conditioned permits for development in and near such channels and along riparian woodlands within streams and rivers to avoid disturbances of aquatic resources.

In the most comprehensive sense, the entire area between the banks of the river could be considered an environmentally sensitive area, at least during portions of the year when covered by higher flows. However, during the summer dry season when river waters are confined to the definable low-flow channels, the dry exposed areas within the stream banks become inaccessible to fish and other aquatic life forms. In recognition of this situation and the resource-dependent nature of sand and gravel mining, for purposes of considering the proposed gravel mining development's consistency with Section 30233(a)(6), when mining would occur during the summer-early fall dry season, the Commission has generally applied the environmentally sensitive area designation only to the portions of the river containing stream flow.

The proposed project would intrude into environmentally sensitive riverine perennial channels in several significant ways: First, approximately 1,356 cubic yards of concrete traffic control barrier materials would be placed across the main channel to form a diversion around the perimeter of the proposed roughly ¼ mile-long extraction work area. Secondly, up to 40,000 cubic yards of gravel are proposed to be removed from the riverine perennial channel. The proposed extraction would involve removing sand and gravel to a depth of 25 feet from within a teardrop-shaped trench within the perennial main channel. The proposed extraction would involve removing sand and gravel to depths of 10 to 20 feet from one continuous 800-ft.-long trench with widths ranging from 50 feet to 175 feet. This differs from previously permitted trenching operations, where the excavation has been performed on the dry exposed gravel bar, such as the series of four 200-ft.-long, 20-ft.-wide, 15-ft.-deep dry trenching compartments authorized in 2001 (see CDP No. 1-01-027).

The applicants' agent reiterates his argument posited in past development applications that the Commission should not consider the proposed mining area as an environmentally sensitive area because the trenching will be dewatered first and therefore the diverted area wouldn't be functioning as a river when the actual trenching is performed. However, the water diversion elements of the project themselves are an integral part of the mineral extraction operation. Moreover, placing the diversion structures across the river constitutes a form of filling of coastal waters. Consequently, even if the trenching was to be viewed as occurring in an area that would not be considered an environmentally sensitive area in its de-watered state, the diversion activity itself is not consistent with Section 30233(a)(6).

Therefore, the Commission concludes that because the proposed sand and gravel mining operation would consist of de-watering and extraction activities within the riverine perennial channel, and the riverine perennial channel is an environmentally sensitive area, the proposed filling and dredging does not qualify as an approvable use for



dredging, diking, or filling in coastal waters and wetlands pursuant to Section 30233(a)(6) of the Coastal Act.

The applicants have also indicated that the gravel extraction project is primarily proposed to restore fish habitat by creating cold deep-water habitat within the aggraded segments of the lower Smith River. Section 30233(a)(7) allows dredging for “restoration purposes.” As discussed in detail above, the proposed project requires dredging of riverine wetlands to re-create a deep-water pool, placement of fill for diversion control structures, access routes across the diversion channel, and the placement of fill to repair a breach on Woodruff Bar that is threatening to bisect the landform and adversely affect its channel-confining properties. The project is designed to increase the diversity of habitat types within the lower Smith River and enhance habitat values for anadromous fish species. Repairing the cleft in the Woodruff Bar would bolster the channel confinement the bar provides such that potential capture of the river’s main channel that could re-direct the main erosive flow of the river on the flood control levee along the southwest bank could be pre-empted.

In past permit actions, the Commission has found wetland enhancement projects where the sole purpose of the project is to improve wetland habitat values to constitute “restoration purposes” pursuant to Section 30233(a)(7). For example, the Commission concurred with a consistency determination for a wetland enhancement project proposed by the U.S. Fish and Wildlife Service at the Humboldt Bay National Wildlife Refuge (CD-33-92). This project involved dredging, diking, and filling of wetlands to create and enlarge shallow ponds and sloughs and replace water control structures and was approved as a “restoration purpose” under Section 30233(a)(7). Similarly in 2000 and 2001, the Commission approved permits for the California Department of Fish and Game authorizing the excavation of shallow ponds within the Department’s Mad River Slough (1-99-063) and Fay Slough (CDP No. 1-00-025) Wildlife Areas for the exclusive purpose of restoration. The Commission approved a permit amendment (CDP No. 1-00-025-A1) in March 2004 for additional restoration work at the Fay Slough Wildlife Area.

Neither the Coastal Act nor the Commission’s administrative regulations contain a precise definition of “restoration.” The dictionary defines “restoration” in terms of actions that result in returning an article “back to a former position or condition,” especially to “an unimpaired or improved condition.”<sup>2</sup> The particular restorative methods and outcomes varying depending upon the subject being restored. For example, the Society for Ecological Restoration defines “ecological restoration” as “the process of intentionally altering a site to establish a defined indigenous, historical eco-system. The goal of the process is to emulate the structure function, diversity, and dynamics of the specified ecosystem.”<sup>3</sup> However, within the field of “wetland restoration,” the term also

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<sup>2</sup> Merriam-Webster’s Collegiate Dictionary, Tenth Edition

<sup>3</sup> “Definitions,” *Society of Ecological Restoration News*, Society for Ecological Restoration; Fall, 1994

applies to actions taken “in a converted or degraded natural wetland that result in the reestablishment of ecological processes, functions, and biotic/abiotic linkages and lead to a persistent, resilient system integrated within its landscape,”<sup>4</sup> that may not necessary result in a return to historic locations or conditions within the subject wetland area. Similarly, “stream restoration” has been defined to be “re-creating spawning and rearing habitats; removing barriers to migration,; and restoring shelter, favorable temperatures, and water quality for the species that evolved in those conditions and therefore will survive in them on their own.”<sup>5</sup> “River restoration,” by contrast, typically include “the re-creation of meander bends on straightened channels, modification of channel geometry to create habitat for fish, planting banks with riparian vegetation, stabilizing eroding embankments, and creating open channels from streams formerly encased in underground culverts.”<sup>6</sup>

Implicit in all of these varying definitions and distinctions is the understanding that the restoration entails returning something to a prior state. Rivers are dynamic systems in which specific attributes, such as the point bars, pools, and riffles are continually created, altered, and destroyed. Consequently “restoration,” as contrasted with “rehabilitation,” encompasses not only reestablishing certain prior conditions but also reestablishing the processes that create those conditions. In addition, most of the varying definitions of restoration imply that the reestablished conditions will persist to some degree, reflecting the homeostatic natural forces that formed and sustained the original conditions before being artificially altered or degraded, and not promptly return to the pre-restored state.

Moreover, finding that proposed diking, filling, and dredging constitutes “restoration purposes” is based, in part, on the assumption that the proposed project will be successful in improving habitat values. Should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed diking, filling, and dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for “restoration purposes.” These two characteristics are particularly noteworthy to restoration grant program administrators in reviewing funding requests to ensure that the return on the funding investment is maximized and liabilities associated with unwanted side-effects of the project are minimized.

Thus, to ensure that the project achieves its stated habitat enhancement objectives, and therefore be recognized as being for “restoration purposes,” the project must demonstrate that: (1) it entails a return to or re-establishment of former habitat conditions for

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<sup>4</sup> *Position Paper on the Definition of Wetland Restoration*, Society of Wetland Scientists, August 6, 2000

<sup>5</sup> *Restoring Steams in Cities – A Guide for Planners, Policymakers, and Citizens*, Ann L. Riley, Island Press, 1998.

<sup>6</sup> *Geomorphology in River Restoration*, Environmental Management, 19:1-15, Matt Kondolf, PhD, 1995

salmonids, the presence of landscape-integrated ecological processes, and/or abiotic/biotic linkages associated with these fish species; (2) there is a reasonable likelihood that the identified improvements in habitat value and diversity will result; and (3) once re-established, it has been designed to provide the desired habitat characteristics in a self-sustaining, persistent fashion independent of the need for repeated maintenance or manipulation to uphold the habitat function.

For the reasons discussed below, the Commission finds that the proposed filling and dredging activities do not qualify under Section 30233(a)(7) as an allowable use for filling and dredging of coastal waters and wetlands.

#### Proposed Restorative Actions

The applicants state that the application currently before the Commission to restore the historic deep-water pool habitat alongside Woodruff Bar and patch the cross-bar breach was developed in response to suggestions from NOAA Fisheries staff as an example of how commercial gravel extraction could be undertaken on Upper Woodruff Bar and not further degrade the habitat and channel dynamics in this portion of the river or frustrate the recovery efforts for the various state and federal-listed threatened and endangered salmonids that inhabit the Smith River.

In a hydro-geomorphic analysis prepared by Ralph Christensen, a California registered geologist retained by the applicants, the purported benefits to fish habitat the proposed project would provide were presented (see Exhibit No. 9). Among the habitat improvements to the lower Smith River the project would provide are:

- Creating a relatively deep-water area in which cool, subsurface “hyporheic” groundwater passing through the adjoining floodplain strata would flow into the excavated pool and thermally-stratify (sink to the bottom) to provide a cold-water refuge for migrating salmonid fish species.
- Filling a cross-channel that has formed in the Woodruff Bar due to poor drainage design associated with past mining activities that unless promptly filled could expand to bisect the bar, potentially resulting in main channel capture that could re-direct the brunt of the river’s erosive hydraulic forces onto the flood control levee along the southwest side of the river. In addition, by repairing the breach that is destabilizing the bar, the subsurface hyporheic river water will continue to flow through the bar, and cool and feed the fish on the downstream side of the bar.

The project is designed to increase the diversity of aquatic habitat types within the lower Smith River and enhance habitat values for water associated fish and wildlife. Excavating the pool along the bar would create a deep-water area where up-river migrating adult fish and sea-bound juveniles could safely hold and rest beyond the

reach of avian and mammalian predators between sprints to the spawning areas further upstream or to the ocean, respectively. Repairing the cleft within Woodruff Bar would help preserve the channel-confining properties of the bar and possibly prevent further destabilization that could lead to significant adverse geomorphic changes, such as formation of a shallow, multi-channeled braided river configuration, or sediment impacts to the river associated with failure of the flood control diking along the southwestern bank.

As proposed, the project includes development that is intended by the applicants to bring about a return to or re-establishment of former habitat conditions for salmonids, the presence of landscape-integrated ecological processes, and/or abiotic/biotic linkages associated with these fish species. However, for several reasons, the applicants have not demonstrated that the alleged benefits of the pool restoration work would actually occur.

First, the timeliness of undertaking the proposed restoration has not been established. No regional assessment has been provided documenting a compelling need for re-creating the historic deep-water pool habitat that apparently existed alongside the Woodruff Bar. Such an appraisal is particularly relevant as there is an on-going debate between interested parties as to whether or not the lower river is “sediment-choked.” Some parties contend that due to the deposition of massive amounts of materials associated with poor timber harvesting practices in the upper watershed by past floods, the bed elevation of the lower river has been adversely elevated and is causing a variety of physical and biological environmental problems that can be improved only by dredging substantial quantities of sediment out of the lower reaches. Others counter that while the mass of gravel in the lower river is considerable, especially when compared with the amounts observed in past decades, these quantities are not out of scale with the magnitude of material that is episodically transported down the river over a geological timescale. Under this view, the current riverbed conditions are best considered as being a temporary anomaly that will be eventually flushed through the system, and there is no need for human intervention.

Second, the severity of need for reestablishing deep-water habitat on the lower Smith River has not been presented. Though it is widely recognized that an alternating riffle/pool configuration is preferable to a continuously shallow or multi-strand braided channel for providing habitat for salmonids, no information has been included with the application to substantiate that migrating fish are undergoing undue stress associated with high temperatures or exposure to predators due to a lack of deep, cold water refugia on the lower Smith River.

Third, no rationale has been provided for excavating a second trench along this segment of the lower Smith River. Although cited as an example of why head-cutting would not likely result from the project, a trench formed in the late 1980s by mining in the main channel alongside the portion of the lower portion of the Woodruff Bar (or “Crockett Bar”) on the adjoining property directly down stream of the project site remains in place.

This feature was not considered as a factor in the justification presented by the applicants for restoring the historic pool on their property.

Therefore, the Commission finds that the alleged benefits that would be derived from the proposed pool restoration work have not been adequately established; thus, the applicants have not demonstrated that the purpose of the proposed gravel extraction qualifies as restoration purposes under Section 30233(a)(7).

Likelihood That Successful Restoration Would Result from the Proposed Development

A second factor that is considered in determining whether a proposed project whether a proposed restoration project has been designed and sited such that there is a reasonably likelihood that the habitat improvement objectives will actually be achieved.

Stream restoration projects, although intended to re-establish or improve habitat conditions for fish or aquatic species, have on occasion led to disastrous results due to poor planning or execution. Like gravel mining and other in-water development, restoration activities involving pit-mining or trenching within active river channels may result in incision upstream of the mine (by nick-point migration) and downstream (by sediment starvation). Incision may cause undermining of structures, lowering of alluvial water tables, channel destabilization and widening, and scouring on adjoining riverbanks, ironically leading to a loss of aquatic and riparian habitat if not properly undertaken.

Numerous examples on North Coast rivers and streams, especially on the Russian River in Mendocino County, Dry Creek in Sonoma County, and Redwood Creek and the lower Eel / Van Duzen River system in Humboldt County can be cited where channel modifications such as trenching in particular has led to lateral avulsion, channel capture, head-cutting, incision, nick-point migration, increases in the rate of meander straightening, decreases in channel sinuosity, lateral erosion of adjacent river banks and point bars, and other profound stream morphologic changes either upstream, downstream or within the excavated reach.<sup>7</sup> These changes can dramatically impact key salmonid habitat attributes by creating discontinuous areas within the floodplain where migrating fish would become stranded during low-flows, cause increases in water temperature due to loss of riparian vegetation, cause elevated sediment levels within the water column, form blockages at tributary confluences, simplify aquatic bed habitat through the removal of large woody vegetation, and other impacts to holding, rearing, and spawning habitat for migratory fish.<sup>8</sup>

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<sup>7</sup> *Impact Assessment of Instream Management Practices on Channel Morphology*, Aquafor Beech, Limited. & Step by Step, September, 1999

<sup>8</sup> *Management of Course Sediment on Regulated Rivers*, Report No. 80, California Water Resources Center, University of California, Davis, October 1993

A major factor in restoration success is knowing when not to act. Nature is resilient and often adjusts to changes in the watershed. A critical part of a restorationist's role is to know when to let such natural processes to make adjustments on its own. This point is emphasized in the draft NOAA Fisheries gravel extraction guidelines currently being circulated for comments:

NOAA Fisheries recommends that gravel extraction projects proposed as stream restoration projects be regarded with caution. Resource management agencies acknowledge that, under the right circumstances, some gravel extraction projects, whether commercial or performed by the agencies themselves, may offer important opportunities for anadromous fish habitat enhancement. That is, gravel removal itself can be used beneficially as a tool for habitat creation, restoration, or rehabilitation (OWRRI, 1995). While it is tempting to promote gravel extraction as a means to enhance or restore stream habitat, the underlying objective of this Guidance document is to prevent adverse impacts caused by gravel extraction operations. Therefore, it is recommended that gravel extraction for habitat enhancement purposes done in conjunction with commercial gravel operations not take precedence, and not be a substitute for, habitat protection.<sup>9</sup>

Being a hydro-geomorphic rather than a biological analysis, the Christensen report submitted by the applicants primarily addresses the geologic history of the site, provides design standards and calculations for the estimated volumes of extracted and graded material needed to re-create the historic pool and repair the cross-bar breach, rationale for the particular designs proposed, and an analysis for potential fluvial destabilization and other impacts that may result from excavating the pool or filling in the cross-channel. The report does discuss the importance of deep, hyporheic-fed pool habitat to anadromous fish and the importance of protecting the channel confinement afforded by the Woodruff Bar, dismissing off-hand the potential for significant river destabilization resulting from the project. The report does not provide a quantitative probabilistic assessment of the feasibility of achieving the proposed habitat improvements. Although anecdotal observations of past usage are compiled in the permit application by the applicants' agent, no factual information is provided as to the likelihood that migrating salmonids will utilize the re-established pool.

The Commission concedes that such analysis can be difficult to develop. Given the inherent complexity of river processes, channel form, and aquatic and riparian ecology, it is simply not possible at our present level of knowledge to predict with certainty the behavior of a river channel in response to specific alterations. Moreover, while certain physical responses to channel alterations (i.e., instigation of head- and down-cutting,

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<sup>9</sup> Comment Draft, *National Gravel Extraction Guidance*, National Marine Fisheries Service, March 18, 2004.

channel capture, etc.) may be generally anticipated based upon past documented observations, or projected from fluvial hydraulic models, the biological responses to changes within a stream are much more elusive. Numerous examples are chronicled within fisheries biology literature where, despite adequate funding, the use of state-of-the-art enhancement measures, and design and implementation by experienced restoration professionals, the enhancement efforts have failed to result in appreciable utilization of the improved habitat.

However, while an error-free quantitative risk assessment may not be possible, a qualitative critique of the project attributes could provide some indication of the likelihood of success of the project to increase and improve habitat conditions. NOAA Fisheries generally considers five factors as being key to the success of restoration projects<sup>10</sup>:

1. Planning – including the establishment of goals, objectives, and performance criteria, taking into consideration time and spatial scales, structural conditions, functional conditions, self-maintenance, and the potential resilience of the system to disturbance in selecting the type of system to be restored and the site selected. Site selection should also examine historical or pre-disturbed conditions, the degree of present alteration, present ecological conditions, and other factors. Determining the level of physical effort, producing engineering designs, costing, scheduling, and producing contingency plans are all part of project planning. Stakeholders and the interested public should be identified and included in project planning.
2. Implementation – the degree by which the planned restoration efforts are carried out, utilizing materials and techniques that have been developed, field-tested, and determined appropriate for restoration projects based upon a record of success. To avoid commonplace mistakes during construction, the operation must be monitored by someone who is aware of the project goals. As partners in the success of the project, engineers and contractors play a key role in ensuring that decisions during construction result in improvement of the river system toward the stated goals. Also critical is the communication of those engineering aspects of the program that might necessitate a revision of goals or performance criteria.
3. Performance Assessment – chiefly entailing development of the monitoring program. The program needs to provide direct feedback on the development of the restored system with respect to performance criteria, using measurements of monitoring parameters. Field-sampling methods are selected for each parameter. The selection of appropriate reference or control sites in the vicinity of the restoration project is critical to analysis of monitoring data in order to identify trends that are not project-related.

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<sup>10</sup> *Systematic Approach to Coastal Ecosystem Restoration*, Prepared for the National Oceanic and Atmospheric Administration by Battelle Memorial Institute, September 2003.

4. Adaptive Management – the degree to which flexibility to respond to identified contingencies are built into the program. The monitoring program is used as a tool to assess project success and identify any problems that might affect progression toward the project goals. Broadly speaking, the options available to the manager are no action, maintenance of the system, and modification of the project goals. If the monitoring program identifies deviation from the predicted path of ecosystem development, adjustments can and should be made.

5. Dissemination of Results – documenting project progress and outcomes so that they may be shared with others and to contribute the evolution of the science. It is important for complete information about the project to be disseminated as widely as possible. All aspects of the project should be documented, to show the effect of decisions, and advancement toward goals. Planning for future projects requires such information to help minimize costs and maximize the probability of success.

Other than repeatedly stating that the National Marine Fisheries Service (NOAA Fisheries) and the California Department of Fish and Game field agent for Del Norte County consulted on the proposed trenching and providing other conclusory statements regarding the purported benefits of creating the deepened channel, the permit application does not contain any specific information or employ a systematic planning process in its development so as to give reasonable assurance that the restoration would be successful, either in the immediate project vicinity or incrementally from a watershed-wide perspective.

In addition, the description of the restoration work within the application implies that project has been designed in close coordination with NOAA Fisheries based on detailed site-specific studies, and that design input and tacit approval for the submitted design had been previously obtained from the agency (see Exhibit No. 4). To the contrary, both NOAA Fisheries and CDFG staff continue to express their concerns to Commission staff regarding the dubious habitat benefits the project would provide or the likelihood of success in bringing about significant and persistent restoration by reestablishing a pool within the main river channel given the overall degraded condition of the river at the site. NOAA Fisheries and CDFG staff have stated to Commission staff that while filling the breach forming in the Woodruff Bar, preferably with imported materials, may be a valid undertaking to prevent future destabilization of the point bar, further sand and gravel extraction at this time in the vicinity of Woodruff Bar would not be consistent with the environmental protections of the LOP that mining be conducted on a sustained yield basis, subject to demonstrated adequate annual replenishment.

Thus, the Commission finds that the alleged benefits that would be derived from the proposed restoration work have not been adequately assured, and therefore, the proposed gravel extraction does not constitute dredging of open coastal waters or wetlands for restoration purposes under Section 30233(a)(7).



Persistent or Self-sustaining Nature of the Resulting Restored Habitat

Finally, for the development to be recognized as being truly for “restoration purposes,” the project should be designed to be reasonably cost-efficient with respect to its design life and maintenance requirements. The applicants readily concede that, like other past gravel mining excavations within the main channel, the excavated deep-water pool is likely to fill with sediment and lose in cold water refugia characteristics in a relatively short timeframe, possibly as few as one to two years upon the return of normal precipitation in the Smith River basin. No consideration was included in the design of the project to further prolong the presence of the deep-water habitat once it would be excavated. For example, the project proposal might have included digger logs, wing dams, or other in-stream restoration structures that could have facilitated self-scouring in the pool. Accordingly, the habitat benefits the restoration development would provide would be relatively short-term in the context of a long-range species recovery effort.

Therefore, for all the above reasons, the Commission concludes the proposed deepening of the main river channel to create cold-water pooling habitat has not been shown to be for “restoration purposes” and thus does not constitute an allowable use for filling and dredging of coastal waters under Section 30233(a)(7) of the Coastal Act.

2. Conclusion

The Commission finds that the proposed gravel extraction operation is not consistent with the requirements of Section 30233 of the Coastal Act, in that the proposed dredging, diking and filling of wetlands is not for one of the allowable uses enumerated within subsections (1) through (8) of Section 30233(a). Therefore, the proposed project is inconsistent with the dredging, diking, and filling of coastal waters and wetlands provisions of Coastal Act Section 30233. No analysis of the consistency of the proposed development with the other three tests of Section 30233 is required to find that the development is inconsistent with Section 30233. The Commission notes that even if the proposed development was consistent with the other three tests of Section 30233, the proposed development would be inconsistent with Section 30233 as well as Section 30236 of the Coastal Act as previously described, and with the public access policies of the Coastal Act as discussed below, and must be denied.

**F. Geologic Hazards and New Development.**

The Coastal Act contains policies to assure that new development provides structural integrity, minimizes risks to life and property in areas of high flood hazard, and does not create or contribute to erosion. Section 30253 of the Coastal Act states in applicable part:

*New development shall:*

- (1) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (2) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.* (emphasis added)

As discussed in Findings Section II.E above, trenching and gravel extraction projects can adversely affect the morphology of the river and create increased erosion and alteration of the riverbed and riverbanks. The applicants provide a fluvial geomorphologic analysis to evaluate the effects of the project on geologic stability of the river and whether the project would lead to erosion or destruction of the riverine environment inconsistent with Section 30253 (see Exhibit No. 9).

However, as discussed in detail in the review memorandum prepared by Mark Johnsson (see Exhibit No. 10), the Commission's staff geologist, in the absence of a basin-wide sediment budget with discrete calculation of the through-put of materials in the river reach on which the project would be conducted, the full effects of any streambed alteration project cannot be precisely predicted with exact detail given the complexities of river sediment transport. Thus, to the degree that information is available as to how the operation will likely affect the dynamics of river flow at low, normal, and flood flow, the overall movement of sediment within the river system, the stability of the river bank and other point and longitudinal bars, and the project's potential to cause increased bank erosion, instigate channel migration, "harden" the river bottom substrate making less desirable for fish habitat, or reduce the availability of sand-sized sediment to the littoral cell, the uncertainty can only be put into perspective, rather than resolved.

Dr. Johnsson notes that:

The effects of the proposed project are potentially complicated and difficult to predict. Well-documented effects from similar excavation operations on rivers elsewhere in the State have resulted in destabilization of the channel, channel incision, and coarsening of the bed. The limited data available do not indicate that such problems have occurred on the Smith River as a result of past activities, but without such basic information as a complete sediment budget, potential impacts of the proposed project are difficult to judge.

Accordingly, regardless of the applicants' stated intent to correct disturbances caused by the accumulation of sediment within the lower river system that has resulted in adverse changes to the river's configuration, the analysis provided by the applicants does not factually substantiate that the project as designed assures stability and structural integrity

as required by Section 30253(2). Paradoxically, given the apparent past mining that has been conducted within the low-flow channel and the lack of clear evidence that adverse channel changes have resulted from past trenching, there is no clear evidence that the project would cause such geologic instability.

The Commission notes that even if the proposed development was consistent with the Section 30253, the proposed development would be inconsistent with Section 30233 as well as Section 30236 of the Coastal Act as previously described, and with the public access policies of the Coastal Act as discussed below, and must be denied.

**G. Public Access.**

Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety.

The project site is located between the first public road (Fred Haight Drive) and the sea (the Smith River is considered to be an arm of the sea in this area). Accordingly, a public access finding is required for the project.

In applying Sections 30210, 30211 and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential public access.

Four shoreline access points presently exist within the coastal zone and the lower Smith River (i.e., downstream and west of the Dr. Fine or Highway 101 Bridge). From west to east, these access points are located at: (1) the southerly end of the mouth of the Smith River; (2) the Ship-a-Shore resort; (3) the southerly end of Sarina Road at the river's confluence with Rowdy Creek; and (4) the County-owned Smith River Fishing Access Point  $\frac{3}{4}$  mile upstream of the project site near the Bailey Gravel Bar. There is no evidence of potential prescriptive rights within the project area.

Recreational use of the lower Smith River is extensive. The principal public access use of the project site that does occur is by fishermen who go out to the river channel for recreational fishing. Other public access and recreational uses of this stretch of the river include canoeing and kayaking. The prime fishing seasons occur during the wet months, when gravel extraction is not occurring. The peak canoeing and boating use takes places

during the spring before the gravel extraction season begins. Thus, the project will not affect the bulk of access use by fishermen, canoeists, or other recreational boaters. The project will also not create any new demands for fishing access or other public access use.

However, unlike operations on the Woodruff Bar in recent years that did not involve work in the main channel and provided a detour around the project site, the current proposal entails diversion and de-watering of the river's main thoroughfare. Although the amount of boating use may be reduced during the July 15 through August 30 when gravel mining is usually performed, any boaters who do choose to traverse the lower Smith River during this timeframe will be faced with having to undertake a lengthy portage around the trench and bar grading sites or attempting passage through the relatively small 48-inch-diameter culvert in the diversion channel.

Given the estimated 300-cubic-feet-per-second discharge rate for this portion of the river during the time of year restoration/mining would be performed, flow velocities of the diverted river water through the culvert cross-section would approximate 32- to 33-miles-per-hour. Navigating this relatively brisk water speed in a confined 48-inch-diameter space inside the culvert may be entirely within the capabilities of an experience kayaker or canoeist, but would be quite perilous for most amateur watercraft enthusiasts, resulting in possible injuries or even drownings.

Alleviating the hazards associated with the enclosed nature of the culvert could be achieved through use of a railroad flatcar crossing designed to provide adequate vertical freeboard (usually three-feet of clearance) instead of the culvert being proposed. However, the applicants have adamantly rejected the substitution of a flatcar for a culverted crossing of the diversion channel, reiterating their perspective that there is nominal use of the lower Smith River for recreational boating use during the gravel extraction season, referencing the presence of other nearby ingress/egress points upstream and downstream of the site, and citing the relative degree of environmental impact that would result from crossing the channel to construct the abutment on the bar from the railcar span.

Therefore, for the reasons discussed above, the proposed project would have significant adverse effects on public access. The Commission therefore finds that the project is inconsistent with the public access policies of the Coastal Act and must be denied.

#### **H. Alternatives.**

Denial of the proposed permit will not eliminate all economically beneficial or productive use of the applicants' property or unreasonably limit the owners' reasonable investment backed expectations of the subject property. Denial of this application to mine sand and gravel from within the year-round channel of the Smith River would still leave the

applicants available alternatives to use the property in a manner that would be consistent with the policies of the Coastal Act.

There are existing uses of the property that allow the applicants/owners to have economic uses of the property without performing the proposed gravel extraction operation. The project site consists of three parcels comprising a total of 300 acres. These lands are currently developed with several farm residences and are in active dairy and cattle ranching uses.

Moreover, there are alternatives to the project itself that could accomplish the two intended objectives of the project of: (a) restoring a portion of the river and its habitat, and (b) providing a certain amount of excavated gravel to process into commercially saleable sand gravel products. With respect to objective (a), it would be a feasible alternative to the project to conduct only the filling of the cross-bar channel portion of the proposed development. This later component of the project is widely acknowledged by the relevant natural resource trustee agencies as having recognizable benefits for restoring fish and wildlife habitat while avoiding the need for channelization or substantial alterations of the river. In addition, without the need to divert the river waters, no interference with public recreational boating access along this portion of the river would result. With respect to objective (b), the applicants could simply not undertake in-stream gravel mining until such time that the exposed gravel bar has been replenished to allow bar-skimming extraction to be possible without causing significant adverse impacts to river channel morphology. A deferred return to bar-skimming when favorable conditions were present at the site would also confine mineral extraction to areas outside of an ESHA, prevent the need for the substantial riverine alterations associated with wet-trenching, and avoid significantly interference with public access consistent with Coastal Act Sections 30233, 30236, and 30210-14, respectively. In addition, it might be possible for the applicants to either purchase in-fee or obtain leases for extracting sand and gravel on other in-stream mining sites.

Therefore, the Commission finds that feasible alternatives to the proposed project exist for the applicants to make economically beneficial or productive use of the property in a manner that would be consistent with the policies of the certified LCP.

#### **I. California Environmental Quality Act.**

Section 13906 of the California Code of Regulation requires Coastal Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would significantly lessen any significant effect that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report.

As discussed herein, in the findings addressing the consistency of the proposed project with the Chapter 3 policies of the Coastal Act, the proposed project is not consistent with the policies of the Coastal Act that restrict the substantial alteration of rivers and streams, restrict the dredging and filling of coastal waters and wetlands, require that geologic stability and structural be assured, and require that development not adversely affect public access.

As also discussed above in the findings addressing project alternatives, there are feasible mitigation measures and feasible alternatives available which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project cannot be found consistent with the requirements of the Coastal Act to conform to CEQA.

#### **IV. EXHIBITS:**

1. Location Map
2. Vicinity Map
3. DWR/CCC Aerial Photograph 212-11, 1:12,000, May, 30, 2001
4. Project Narrative and Mining Site Plan
5. *Public Notice - Letter of Permission Procedure No. LOP 2003-2*, U.S. Army Corps of Engineers, March 26, 2004
6. *Final Biological Opinion - Letter of Permission Procedure Gravel Mining and Extraction Activities within Del Norte County LOP 2003-2*, National Marine Fisheries Service, September, 2003
7. Excerpt, *Recovery Strategy for California Coho Salmon – Report to the California Fish and Game Commission*, California Department of Fish and Game, August, 2003
8. *Notice of Proposed Changes in Regulations*, California Fish and Game Commission, California Regulatory Notice Register 2004, Volume 11-Z, pp. 302-304
9. Excerpt, *Geomorphology and Hydrology Wetherell – Upper Woodruff Bar Salmon Habitat Restoration*, EGR & Associates, Inc., August 30, 2003
10. *Review Memorandum*, Mark Johnsson PhD, CEG, CHG, California Coastal Commission – Technical Services Unit, April 19, 2004